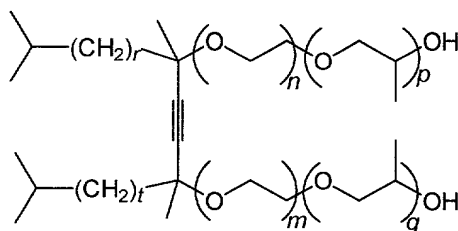


## CLAIMS

We claim:

1. A method for making an acetylenic diol ethylene oxide/propylene oxide adduct which is capped with two propylene oxide units which comprises reacting an acetylenic diol ethylene oxide adduct with propylene oxide in the presence of a catalytically effective amount of a trialkylamine, the acetylenic diol moiety derived from 2,4,7,9-tetramethyl-5-decyne-4,7-diol or 2,5,8,11-tetramethyl-6-dodecyne-5,8-diol.

2. The method of Claim 1 in which the resulting adduct has the structure



where  $r$  and  $t$  are 1 or 2,  $(n + m)$  is 1.3 to 30 and  $p$  and  $q$  are each 1.

3. The method of Claim 1 in which the trialkylamine is trimethylamine.

4. The method of Claim 2 in which  $(n + m)$  is 1.3 to 15.

5. The method of Claim 2 in which  $(n + m)$  is 1.3 to 10.

6. The method of Claim 2 in which the acetylenic diol moiety is derived from 2,4,7,9-tetramethyl-5-decyne-4,7-diol.

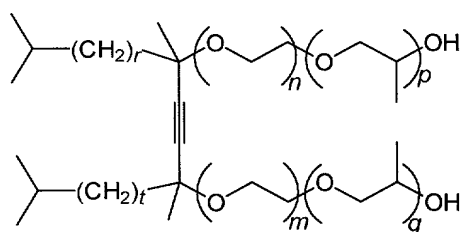
7. The method of Claim 2 in which the acetylenic diol moiety is derived from 2,5,8,11-tetramethyl-6-dodecyne-5,8-diol.

8. The method of Claim 6 in which  $(n + m)$  is 1.3 to 10.

9. The method of Claim 7 in which  $(n + m)$  is 1.3 to 10.

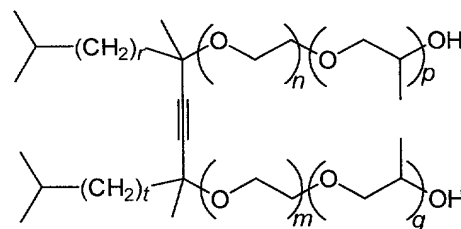
10. The method of Claim 1 in which the temperature of the reaction is 40-150°C, the pressure is 2-20 bar and the trialkylamine is present at 0.001 to 10 wt% of the total reactant mass.

11. An acetylenic diol ethylene oxide/propylene oxide adduct of the structure



where  $r$  and  $t$  are 1 or 2,  $(n + m)$  is 1.3 to 30 and  $(p + q)$  is 1 to 10, the ethylene oxide and propylene oxide units being distributed along the alkylene oxide chain in blocks or randomly.

12. An acetylenic diol ethylene oxide/propylene oxide adduct of the structure



where  $r$  and  $t$  are 1 or 2,  $(n + m)$  is 1.3 to 30 and  $(p + q)$  is 1 to 10, the ethylene oxide and propylene oxide units being distributed along the alkylene oxide chain in blocks.

13. The acetylenic diol ethylene oxide/propylene oxide adduct of Claim 12 in  
5 which the adduct is capped with the propylene oxide units.

14. The acetylenic diol ethylene oxide/propylene oxide adduct of Claim 13 in  
which  $(n + m)$  is 1.3 to 15.

10 15. The acetylenic diol ethylene oxide/propylene oxide adduct of Claim 13 in  
which  $(n + m)$  is 1.3 to 10 and  $(p + q)$  is 1 to 3.

16. The acetylenic diol ethylene oxide/propylene oxide adduct of Claim 13 in  
which the acetylenic diol moiety is derived from 2,4,7,9-tetramethyl-5-decyne-4,7-diol.  
15

17. The acetylenic diol ethylene oxide/propylene oxide adduct of Claim 13 in  
which the acetylenic diol moiety is derived from 2,5,8,11-tetramethyl-6-dodecyne-5,8-  
diol.

20 18. The acetylenic diol ethylene oxide/propylene oxide adduct of Claim 16 in  
which  $(n + m)$  is 1.3 to 10 and  $(p + q)$  is 1 to 3.

19. The acetylenic diol ethylene oxide/propylene oxide adduct of Claim 17 in  
which  $(n + m)$  is 1.3 to 10 and  $(p + q)$  is 1 to 3.  
25

20. The acetylenic diol ethylene oxide/propylene oxide adduct of Claim 18 in which  $(p + q)$  is 2.

21. The acetylenic diol ethylene oxide/propylene oxide adduct of Claim 19 in  
5 which  $(p + q)$  is 2.

22. The acetylenic diol ethylene oxide/propylene oxide adduct of Claim 20 which is the 5 mole ethoxylate/2 mole propoxylate adduct of 2,4,7,9-tetramethyl-5-decyne-4,7-diol.

10

ML01790B.APP